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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,485

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Mitsuru Shinagawa

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EXAMINER

KASRAIAN, ALLAHYAR

ART UNIT

PAPER NUMBER

2617

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/524,485	<b>Applicant(s)</b> SHINAGAWA ET AL.	
	<b>Examiner</b> ALLAHYAR KASRAIAN	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/24/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Remarks*

1. The present Office Action is based upon the Applicant's amendment filed on 04/24/2008. **Claims 1-13** are now pending in the present application.

### *Information Disclosure Statement*

2. The information disclosure statement submitted on 04/24/2008 has been considered by the Examiner and made of record in the application file.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. **Claims 5 and 10-11** is rejected under 35 U.S.C. 102(a) as being anticipated by **Shinagawa et al. (US Patent Application Pub. # 20030060162)** (hereinafter Shinagawa).

Consider **claim 5**, Shinagawa discloses a transceiver comprising (any of FIGs. 7, 9 or 11, abstract):

a transceiver main body that induces an electric field based on information to be transmitted in an electric field transmission medium from a transmitting electrode,

thereby transmitting the information via said electric field transmission medium (any of FIGs. 7, 9 or 11, abstract, par. 0067-0069 for transceiver 3, an electric field transmission medium 100, and a transmitting electrode 105');  
a battery that drives said transceiver main body (par. 0126, 0181-0184); and  
an insulating case that incorporates said transceiver main body (any of FIGs. 7, 9 or 11, par. 0067, 0087, 0099 for insulation film 106'),

wherein said transmitting electrode is provided on the whole surface of a portion of an external wall surface of said insulating case, said electric field transmission medium closely approaching the portion, and is covered with an insulating film so as not to be in direct contact with said electric field transmission medium (any of FIGs. 7, 9 or 11, abstract, par. 0067, 0087, 0099 for insulation film 106'); The transmitting electrode is transmitting electrode where the whole portion will be contact to the transmission medium 100 through insulation film 106' as disclosed in FIGs. 7, 9 and 11).

Consider **claim 10 as applied to claim 5 above**, Shinagawa discloses a ground electrode that defines a reference voltage which is necessary to drive said transceiver main body, and that is attached to an internal wall surface of said insulating case (par. 0126-0128, it is a well-known safety standard (and inherently taught) that the electric ground connection should be to the body of a device).

Consider **claim 11 as applied to claim 5 above**, Shinagawa discloses a ground electrode that defines a reference voltage which is necessary to drive said transceiver

main body, and that is attached to an external device at the outside of said insulating case (par. 0126-0128, it is a well-known safety standard (and inherently taught) that the electric ground connection of the devices connection to each others should be attached).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shinagawa et al. (US Patent Application Pub. # 20030060162)** (hereinafter Shinagawa) in view of **Takeuchi et al. (US Patent Application Pub. # 20030151600)** (hereinafter Takeuchi) further in view of **Trinh (US Patent Application Pub. # 20040066605)**.

Consider **claim 1**, Shinagawa discloses a transceiver comprising (FIG. 6-11):

a transmitting and receiving electrode that induces an electric field in an electric field transmission medium, and receives the electric field induced in said electric field transmission medium (any of FIG. 6-11, abstract, par. 0033, 0066-0069, for transmission and reception electrodes 105 and 107, or 105', the electric field transmission medium 100);

a transceiver main body that generates said electric field based on information to be transmitted in said transmitting and receiving electrode, and converts said electric field generated in said transmitting and receiving electrode into reception information, thereby transmitting and receiving information via said electric field transmission medium (any of FIG. 6-11, abstract, par. 0033, 0066-0069, 088-0090, for the transceiver body 3);

a first structure that is interposed between said transmitting and receiving

electrode and said electric field transmission medium (any of FIGs. 6-11, par. 0008-0011, 0014, 0067, 0087, 0091-0092, 0099 for insulation films 106, 108, or 106' between transmitting and receiving electrode and said electric field transmission medium);

a second structure that is interposed between said transceiver main body and said electric field transmission medium (any of FIGs. 7, 9, or 11, par. 0067, 0087, 0099 for insulation film 106');

a battery that drives said transceiver main body (par. 00126); and

However, Shinagawa fails to disclose a third structure that is interposed between said transceiver main body and said battery, wherein said first, said second, and said third structures are composed an insulator, and are equivalent to a parallel circuit of a resistor and a capacitor.

In the same field of endeavor, Takeuchi discloses a third structure that is interposed between said transceiver main body and said battery (par. 0105).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate insulating a power supply circuit and transceiver as taught by Takeuchi for the power supply circuit (which could include a battery) and transceiver as disclosed by Shinagawa for purpose of isolating circuits from each others for preventing inductions and crosstalk between circuits.

However, Shinagawa as modified by Takeuchi fail to disclose said first, said second, and said third structures are composed an insulator, and are equivalent to a parallel circuit of a resistor and a capacitor.

In the same field of endeavor, Trinh disclose the structures are composed an

insulator, and are equivalent to a parallel circuit of a resistor and a capacitor (par. 0011).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the disclose of equivalent circuit of a dielectric substance as taught by Trinh to the structures disclosed by Shinagawa as modified by Takeuchi for purpose of representing dielectric substances with electrical elements.

Consider **claim 2 as applied to claim 1 above**, Shinagawa as modified by Takeuchi further as modified by Trinh disclosed the claimed invention except the impedance of said second structure and the impedance of said third structure are larger than the impedance of said first structure.

Nonetheless, the Examiner takes Official Notice of the face that in order to induce energy to human body as compare to preventing the unwanted energy induction and crosstalk between circuit blocks, the impedance of the structure between the transceiver and power supply circuits should be larger than the impedance of the structure between the transmission medium and transceiver circuit.

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to use substances with different impedances as claimed in the transceiver disclosed by Shinagawa as modified by Takeuchi further as modified by Trinh for purpose of using substances for preventing energy induction between circuit blacks as compare to substances for intending induce of energy from one block to another.



Consider **claim 3**, Shinagawa as modified by Takeuchi further as modified by Trinh disclosed the claimed invention **as applied to claim 2 above**, in addition Shinagawa discloses said first structure is an insulating film that covers said transmitting and receiving electrode against said electric field transmission medium (any of FIGs. 7, 9, or 11, par. 0067, 0087, 0091-0092).

Consider **claim 4**, Shinagawa as modified by Takeuchi further as modified by Trinh disclosed the claimed invention **as applied to claim 2 above**, in addition Shinagawa discloses said second structure and said third structure are insulating members (any of FIGs. 7, 9, or 11, par. 0067, 0087, 0091-0092 and par. 0011 of Trinh).

7. **Claims 6-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shinagawa et al. (US Patent Application Pub. # 20030060162)** (hereinafter Shinagawa) in view of **Takeuchi et al. (US Patent Application Pub. # 20030151600)** (hereinafter Takeuchi).

Consider **claim 6 as applied to claim 5 above**, Shinagawa disclosed the claimed invention except an insulating member between said battery and said transceiver main body.

In the same field of endeavor, Takeuchi discloses an insulating member between said battery and said transceiver main body (par. 0105).

Therefore, it would have been obvious to a person of ordinary skills in the art at

the time the invention was made to incorporate insulating a power supply circuit and transceiver as taught by Takeuchi for the power supply circuit (which could include a battery) and transceiver as disclosed by Shinagawa for purpose of isolating circuits from each others for preventing inductions and crosstalk between circuits.

Consider **claim 7-9**, Shinagawa as modified by Takeuchi discloses an insulating member between said battery and said transceiver main body (par. 0105).

However, Shinagawa as modified by Takeuchi fail to disclose expressly said insulating member is a foam member containing air, a plurality of wooden pillars, or a cushion member having predetermined gas confined therein.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a foam member containing air, a plurality of wooden pillars, or a cushion member having predetermined gas confined therein as an insulating substance.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Shinagawa as modified by Takeuchi's insulating material to obtain the invention as specified in claims 7-9.

8. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shinagawa et al. (US Patent Application Pub. # 20030060162)** (hereinafter Shinagawa) in view of **Mathews et al. (US Patent Application Pub. # 20040254435)**

(hereinafter Mathews).

Consider **claims 12 and 13**, Shinagawa discloses a transceiver comprising:  
a transceiver main body that induces an electric field based on information to be transmitted in an electric field transmission medium from a transmitting electrode, and receives information based on the electric field induced in said electric field transmission medium with a receiving electrode, thereby transmitting and receiving the information via said electric field transmission medium (any of FIG. 6, 8 or 10, abstract, par. 0033, 0066-0069, 0088-0090 for transmission and reception electrodes 105 and 107, the transceiver body 3, the electric field transmission medium 100);

a battery that drives said transceiver main body (par. 00126); and

an insulating case that incorporates said transceiver main body, wherein said transmitting (or receiving) electrode is provided on the whole surface of a portion of an external wall surface of said insulating case, said electric field transmission medium closely approaching the portion, and is covered with a first insulating film so as not to be in direct contact with said electric field transmission medium (any of FIG. 6, 8 or 10, par. 0066-0069, 0088-0090 for transmitting electrodes 105 with the first insulation film 106),  
and

said receiving (or transmitting) electrode is provided on an external wall surface of said first insulating film, and is covered with a second insulating film so as not to be in direct contact with said electric field transmission medium (any of FIG. 6, 8 or 10 par. 0066-0069, 0088-0090 for receiving electrodes 107 with second insulating film 108).

However, Shinagawa fails to explicitly disclose an insulating case that incorporates said transceiver main body wherein said transmitting (or receiving) electrode is provided on the whole surface of a portion of an external wall surface of said insulating case, and said receiving (or transmitting) electrode is provided on an external wall surface.

In the same field of endeavor, Mathews discloses a probe with an insulating case said transmitting (or receiving) electrode is provided on the whole surface of a portion of an external wall surface of said insulating case, and said receiving (or transmitting) electrode is provided on an external wall surface (FIG. 2-3 par. 0031-0037, for insulating case 18, and receiving/transmitting electrode 20).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate an insulating case with a transmitting/electrodes which is provided on the whole surface of a portion of an external wall surface of said insulating case as taught by Mathews to the transceiver disclosed by Shinagawa for purpose of measuring biopotential signal.

### ***Response to Arguments***

9. Applicant's arguments with respect to **claims 1-13** have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to

Applicant's disclosure.

- a. Schmitt et al. (U.S. Patent # 6088585) disclose Portable telecommunication device including a fingerprint sensor and related methods
- b. Webster, Jr. et al. (U.S. Patent # 6064905) disclose Multi-element tip electrode mapping catheter
- c. Alt et al. (U.S. Patent Application Publication # 20070299349) disclose Remote Control of Implantable Device Through Medical Implant Communication Service Band
- d. Besson et al. (U.S. Patent Application Publication # 20070208235) disclose Wireless medical diagnosis and monitoring equipment
- e. Czarnek (U.S. Patent Application Publication # 20060149168) discloses Capacitive uterine contraction sensor

11. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

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12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The Examiner can normally be reached on Monday-Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Allahyar Kasraian/

Examiner, Art Unit 2617

A.K./ak

August 8, 2008

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/Rafael Pérez-Gutiérrez/

Supervisory Patent Examiner, Art Unit 2617